

ANSWERS TO LEGAL QUESTIONS, APRIL 14, 2011

ITEM	LEGAL QUESTION	RPM RESPONSE	CONCUR
1	Two Conceptual Site Models for the Site: There is one for the northern waste pits and the ensuing water and a separate conceptual site model for the southern waste pit. This is not consistent with EPA Guidance on creating one conceptual site model for a site.	CSMs for different geographical areas are appropriate to document exposure pathways applicable to that area. As the RI progresses, CSMs will either be combined or addressed separately if the site results in multiple OUs.	PT BF
		PT: The CSMs are not inconsistent and are appropriate at this time to plan for sampling in different areas (one with ISE, one without ISE) on different schedules. CSMs may be combined in the future.	BF
2	2 Sites: The SAP treats the southern impoundment as a separate site.	The use of separate CSMs and the possibility of administering north and south impoundments as separate OUs is appropriate.	PT BF
3	Under 1.4 Problem Definition and Background of the SAP, states "Relevant background information on the Site, including the Site history and a CSM for the area of investigation north of I-10, can be found in Anchor QEA and Integral (2010). The CSM and Site history presented by Anchor QEA and Integral (2010) do not address historical waste disposal practices in areas south of I-10, or any related releases of hazardous substances, contaminant transport, or exposure pathways."	Historical information on the south impoundment is provided in 1.4.1 Site Description and Appendix B: Area 4 Historical Documents, Historical Aerial Images, and Lidar Data.	PT BF
4	(a) SAP contradicts EPA's Action Memo for time critical removal action regarding background (existence of background # and sediments samples are below background).	No contradiction exists regarding background. The TCRA action level is only applicable up to the 1966 boundary of north impoundments and not appropriate to be interpreted as ISE for any watershed areas beyond that 1966 boundary.	VL PT BF
		PT: Though the overall site background has not been 'officially' determined, upstream background sediment areas have been assessed. At this time, no contradiction exists between the TCRA action memo and the current RI/FS regarding background.	BF

5	<p>(b) SAP contradicts EPA's Action Memo on the conclusion that contamination from the southern impoundment has not released into the water and is not a pathway for exploration. (CSM for the southern impoundment is incorrect.) In the Site description of SAP (pg 7), it states "no releases into water from south impoundment... Results from the sediment sampling indicate that sediments from the 3 stations directly adjacent to the southern impoundment area are not contaminated with dioxins and furans at levels greater than those found in sediment from upstream background area sampled at the same time. These data suggest that dioxins and furans have not been released from the south impoundment to the adjacent aquatic environment." In the CSM section (pg 13), it states "the impoundment south of I-10 was not exposed to surface waters as a result of subsidence, and sediments to the west of the impoundments are not contaminated with dioxins and furans to levels above background, indicating that contamination from the former impoundment has not been released to the aquatic environment."</p>	<p>No contradiction exists regarding the TCRA action memo's conclusion that releases from the north impoundment has been observed. It is accurate that at this time, the EPA has not identified any evidence of actual releases of hazardous substances from the south impoundment.</p>	VL PT BF
		<p>PT: The current data actually does not indicate release from the south impoundment into the waterway. There are dioxins/furans all throughout the watershed. As part of the RI, fingerprinting is planned to be conducted on all RI samples.</p>	BF
6	<p>NOTE: This (no release of pulp mill waste into water based on sediment sampling results) was stated in Respondents' September 3, 2010 correspondence as justification for not complying with the UAO and sampling the southern impoundment as required by EPA.</p>	<p>The position of MIMC in their September 10, 2010 correspondence has no bearing on and does not influence whether or not an actual release has been or would be observed by EPA for the south impoundment.</p>	PT BF
7	<p>Language is problematic because:</p> <ul style="list-style-type: none"> <li>• Background has not been determined yet for the RI/FS</li> </ul>	<p>Background upstream sediment samples have been validated since September 2010. It is accurate that these sediment results, when compared with the three sediment samples directly adjacent to the west of the south impoundment, do not indicate any actual releases of hazardous substances from the south impoundment.</p>	PT BF
8	<ul style="list-style-type: none"> <li>• 1 of the 3 samples is above EPA's action level for the time critical removal action memo and gives rise to an ISE (imminent and substantial endangerment) Sample is 4.98 parts per trillion non-organic carbon normalized. Action level for the removal is anything above 4.5 parts per trillion non-organic carbon normalized. [2 of the 3 are just below the ISE standard. 3.29 and 3.1 parts per trillion non-organic carbon normalized.]</li> </ul>	<p>The TCRA action level is only applicable up to the 1966 boundary of north impoundments and not appropriate to be interpreted as ISE for any watershed areas beyond that 1966 boundary.</p>	VL PT BF

9	<ul style="list-style-type: none"> <li>• Data may indicate quite the opposite that there is a release into the waterway from the southern impoundment (but more sampling will need to be done to confirm) [Risk assessor stated that sampling of the shoreline was proposed by EPA and rejected by Respondents and may be the type of information needed if there is a release from the impoundments.]</li> </ul>	<p>Data at this time does not indicate any actual release from the south impoundment. The sampling is designed to assess the most probable source location of pulp and paper mill waste contamination in the south impoundment, and then if necessary, expand from there.</p>	PT BF
		<p>PT: Risk assessor did not say respondents rejected... risk assessor stated that such sampling was considered as part of our in-house discussions. The current data actually does not indicate release into the waterway. Respondents provided adequate justification, verified by risk assessors, for the sampling approach at this time. In addition, as part of the RI, fingerprinting is planned to be conducted on all RI samples.</p>	BF
10	<ul style="list-style-type: none"> <li>• Aerials indicate that south impoundment was constructed adjacent to the shoreline of the peninsula of I-10 (pg 7) and there is a potential for release from southern impoundment into the waterway</li> </ul>	<p>Sampling on the south impoundment was designed to examine the potential for threatened releases, as no actual releases have been observed at this time.</p>	PT BF
11	<p>Description of Site history is not accurate and is used to justify the sampling plan which doesn't fully characterize the potential contamination for the southern waste pit. The PRPs interpret site history based on aerial photographs. Use aerials to justify sampling a limited portion of the southern waste pit (1966 flooded area of the peninsula—an area smaller than EPA's estimated area of the southern impoundment both south and east of the flooded area. Basically the 1966 flooded area is 1/3 of the area estimated to be the southern impoundment).</p>	<p>Complete agreement on site history is not a necessity to finalize sampling design. The usage of different interpretations of aerial photography collected from 1944 to 2010 is appropriate because the sampling design considers all interpretations for its finalization.</p>	PT BF
		<p>VL: What was the rationale for presenting the alternate interpretation? ST: The alternate aerial photography interpretation came from 2 TCEQ (i.e., a small subset out of the overall EPA/TCEQ/Trustees/HC reviewers who agreed with the main site history interpretation). Even though this alternate was a different interpretation, I did want to include their comment so that it would be captured for the SAP design. It was and the subsequent responses to their comment were reviewed and approved by them for integration into the SAP design.</p>	PT BF

12	<p>Assumptions to justify sampling small portion of peninsula (smaller than estimated area of impoundment):</p> <ul style="list-style-type: none"> <li>• The SAP states that “it appears that the interior of the impoundment was elevated above the edges that parallel the berms. This configuration is consistent with a construction process involving excavation of soils and use of the sidecast to create the berms directly adjacent to the excavated area. In this type of process, the excavated area directly adjacent to the berms is deepest, and the area in the middle is undisturbed and remains at a somewhat higher elevation.” There is no documentation that EPA has that supports that that this was how the berms were built nor can one say whether a portion of the impoundment is elevated from an aerial.</li> </ul>	EPA (with TCEQ, Natural Resource Trustees, and Harris County) supports the stated appearance as one interpretation of the aerial photography collected from 1944 to 2010.	PT BF
13	<ul style="list-style-type: none"> <li>• The SAP states “Vegetation within the 1964 impoundment resembles vegetation outside of it, and resembles vegetation in 1962...If the entire area defined by the larger of USEPA’s 2 estimated perimeters had been flooded by liquid waste between 1962 and 1964, vegetative impacts would be observable as changes between 1962 and 1964.” EPA documents indicate that disposal of waste into the southern impoundment was between April 1965 and September 1965. There is no aerial photograph from 1965 the year the impoundment was used. The operational documentation is based on 104(e) responses from MIMC and IP and is not reflected in the Site History in the SAP.</li> </ul>	EPA (with TCEQ, Natural Resource Trustees, and Harris County) supports the stated resemblance as one interpretation of the aerial photography collected from 1944 to 2010.	PT BF
14	<ul style="list-style-type: none"> <li>• The SAP states “there is no indication that an eastern berm existed at the location of the eastern edge of the larger of US EPA’s 2 estimated impoundment perimeters.” The SAP then goes to compare the aerial from 1962 to 1964. The impoundments were used in 1965, the year in which no aerial photograph have been found.</li> </ul>	EPA (with TCEQ, Natural Resource Trustees, and Harris County) supports the stated indication as one interpretation of the aerial photography collected from 1944 to 2010.	PT BF
15	<ul style="list-style-type: none"> <li>• The SAP states “the flooded area visible in the aerial photograph from 1966 is consistent with a drawing of the southern impoundment by Mc Ginnes.” The SAP is referencing a hand drawing in pencil and no the flooded area in the 1966 photo does not match the 1966 map that is the area in black in Figure 5 which encompasses a large swath of land south and east of the flooded area.</li> </ul>	EPA (with TCEQ, Natural Resource Trustees, and Harris County) supports the stated consistency assumption as one interpretation of the aerial photography collected from 1944 to 2010.	PT BF

16	<ul style="list-style-type: none"> <li>• See below comment too. The SAP states “The alternative interpretation of the Site history was provided in agency comments on the draft of this document, which are provided in Appendix C. This alternative interpretation indicates that, in light of limits to the available documentation and photographs of the area, there are still uncertainties about the site history.” Is the SAP not an EPA document where EPA’s determination/interpretation governs? EPA has its site history of the site and it does not match the PRPs. Yet, it is the PRP’s version that is in the site history section of the SAP and EPA’s comments are placed in Appendix C and are chalked up to site uncertainty. EPA’s vision of the site should govern the sampling plan and the site history that is placed in the SAP. EPA after all has to approve the document and then it becomes an EPA document.</li> </ul>	<p>Complete agreement on site history is not a necessity to finalize sampling design. The usage of different interpretations of aerial photography collected from 1944 to 2010 is appropriate because the sampling design considers all interpretations for its finalization.</p>	PT BF
17	<p>Sampling Plan will not get the information needed in the RI/FS.</p> <ul style="list-style-type: none"> <li>• The CSM for the SAP states “Historical aerial photography suggests that the area affected by the waste impoundments is likely limited to an area that appears to have been flooded in 1966.” There is no basis for the SAP to limit sampling to the flooded area. The assumptions on which that are based in not correct.</li> </ul>	<p>The sampling design does not 'limit' sampling to just the flooded area. The sampling is designed to assess the most probable source location of pulp and paper mill waste contamination in the south impoundment, and then if necessary, expand from there.</p>	PT BF
18	<ul style="list-style-type: none"> <li>• The SAP states “The overarching issue to be addressed by the study described in this Addendum is whether COIs associated with paper mill wastes generated in the 1960s occur in the surface and subsurface areas of Area 4 and, if so, the nature and extent of their distribution in affected soils.” The problem with that statement is that the impoundment was built on the shoreline of the San Jacinto River. There are potential for releases into the San Jacinto River and a documented hit of dioxin above the time critical removal action level immediately adjacent to the southern impoundment. The SAP does not address the nature of extent of contamination beyond the soil media.</li> </ul>	<p>The TCRA action level is only applicable up to the 1966 boundary of north impoundments and not appropriate to be interpreted as an action level for any watershed areas beyond that 1966 boundary. The sampling is designed to assess the most probable source location of pulp and paper mill waste contamination in the south impoundment, and then if necessary, expand from there.</p>	VL PT BF

19	<ul style="list-style-type: none"> <li>• The SAP in states that the only uncertainties and data gaps are ... “The soil study proposed in this document addresses the collection and analysis of new information to address the uncertainties concerning the nature and extent of contamination, exposure potential, and risks due to contamination of soils associated with the southern impoundment, and potential for ongoing or post-remediation recontamination of sediment as a result of surface transport of contaminated soil to the aquatic environment.” Surface transport of contaminated soil to the aquatic environment is not the only potential pathway and they should all be evaluated (e.g. groundwater) as well as determine if the southern impoundment is all land based.</li> </ul>	Conceptual exposure pathways relevant to the south impoundment are identified in Figure 6: Conceptual Site Model Pathways for the Area South of I-10.	PT BF
20	EPA comments are not incorporated into the sampling plan. For the Site history, there are 6 pages of the description of Site History that is not supported by EPA records or EPA comments. Then on Page 12 of the SAP, the last paragraph states “The alternative interpretation of the Site history was provided in agency comments on the draft of this document, which are provided in Appendix C. This alternative interpretation indicates that, in light of limits to the available documentation and photographs of the area, there are still uncertainties about the site history.”	Complete agreement on site history is not a necessity to finalize sampling design. EPA comments are incorporated and the grid in Appendix C contains the comments and the agreed upon responses as a record for the SAP.	PT BF
21	Incorrect Statements in SAP that serve as foundation for sampling plan in which the Phase I sampling is not broad enough to ascertain nature and extent of contamination (limiting sampling to flooded area in 1966 map which is 1/3 of the area EPA believes to be where the contamination is located).	The sampling design does not 'limit' sampling to just the flooded area. The sampling is designed to assess the most probable source location of pulp and paper mill waste contamination in the south impoundment, and then if necessary, expand from there.	PT BF
22	<ul style="list-style-type: none"> <li>• The SAP states “ However, if the area most likely to contain concentrated wastes does not show significant contamination (flooded area), and surface soils in this area do not show evidence of contamination by paper mill wastes, then the absence of information on soil chemistry elsewhere on the peninsula south of I-10 is not a data gap.” Cannot make that assumption. It is not known if the waste pits are still there or have been altered/excavated.</li> </ul>	The sampling is designed to assess the most probable source location of pulp and paper mill waste contamination in the south impoundment, and then if necessary, expand from there.	PT BF

23	<ul style="list-style-type: none"> <li>• The SAP states in the Nature and Extent Section “The Site history suggests that concentrated waste materials, if present, are more likely to be within the area shown as excavated in the 1964 aerial photograph than elsewhere on the peninsula south of I-10.” Incorrect assessment. EPA records indicate waste operations for the southern impoundment occurred from April until September 1965 (including the disposal contract).</li> </ul>	EPA, TCEQ, Natural Resource Trustees, and Harris County supports that assumption as one interpretation of the aerial photography collected from 1944 to 2010.	PT BF
24	Appendix C: EPA Comments [Comment #2, #4, #7, #8, ] Is there a reason that Respondents ignore EPA’s comments on providing a sampling plan that covers the entirety of the possible contaminated area, “rather than relying on interpretations which may not be in consensus between the Respondents and regulators”? Typically, when Respondents ignore comments under an UAO, the EPA issues a deficiency letter and will follow up with a Notice of Violation Letter if Respondents do not correct the deliverable to reflect the comments. The UAO requires under paragraph 54 “EPA reserves the right to comment on, modify, and direct changes for all deliverables. Respondents must fully correct all deficiencies and incorporate and integrate all information and comments supplied by EPA either in subsequent or resubmitted deliverables.”	EPA’s comments were not ‘ignored’. Complete agreement on site history is not a necessity to finalize sampling design. EPA comments are incorporated and the grid in Appendix C contains the comments and the agreed upon responses as a record for the SAP.	PT BF
Barbara Nann, Site Attorney (verbatim from March 31, 2011 email topic: San Jacinto RI/FS Outstanding Issues; attachment: Technical Concerns with the Sampling and Analysis Plan for South Impoundment.docx)		Stephen Tzhone, RI/FS RPM	Valmichael Leos, TCRA RPM  Philip Turner, HH and Eco Risk Assessor  Barry Forsythe, Eco Risk Assessor